

In this section, hydric soils are defined and described and the hydric soils in the survey area are listed. The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for each of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 1995). These criteria are used to identify a phase of a soil series that normally is associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (USDA, 1999) and "Keys to Soil Taxonomy" (USDA, 1998) and in the "Soil Survey Manual" (USDA, 1993).

If soils are wet enough for a long enough period to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils in this survey area are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 1996).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units in the Hydric Soil Interpretations table meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 1996).

Map units that are made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

These map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

HYDRIC SOIL INTERPRETATIONS  
HYDRIC SOILS LIST  
Adams County, Nebraska

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All mapunits are displayed regardless of hydric status and are listed in alpha-numeric order by mapunit symbol. The "Hydric Soils Criteria" columns indicate the conditions that caused the mapunit component to be classified as "Hydric" or "Non-Hydric". These criteria are defined in "Hydric Soils of the United States" (USDA Miscellaneous Publication No. 1491, June, 1991). See the "Criteria for Hydric Soils" endnote to determine the meaning of these columns. Spot symbols are footnoted at the end of the table.

Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
2An: ANSELMO FINE SANDY LOAM, TERRACE, 0 TO 1 PERCENT SLOPES	ANSELMO	No	terrace	---	---	---	---
2AnA: ANSELMO FINE SANDY LOAM, TERRACE, 1 TO 3 PERCENT SLOPES	ANSELMO	No	flat, hummock, terrace	---	---	---	---
2Ap: ANSELMO LOAM, TERRACE, 0 TO 1 PERCENT SLOPES	ANSELMO	No	terrace	---	---	---	---
2Cm: CASS LOAM, OCCASIONALLY FLOODED	CASS	No	flood plain	---	---	---	---
2Hb: HOBBS SILT LOAM, OCCASIONALLY FLOODED	HOBBS	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
2Hd: HORD SILT LOAM, TERRACE, 0 TO 1 PERCENT SLOPES	HORD	No	terrace	---	---	---	---
2HdA: HORD SILT LOAM, TERRACE, 1 TO 3 PERCENT SLOPES	HORD	No	alluvial fan, terrace	---	---	---	---
2Hs: HASTINGS SILT LOAM, THIN SOLUM VARIANT	HASTINGS VARIANT	No	interfluve	---	---	---	---
2Ks: KENESAW SILT LOAM, TERRACE, 0 TO 1 PERCENT SLOPES	COZAD	No	terrace	---	---	---	---
AED: ARENTS, EARTHEN DAM	ARENTS, EARTHEN DAM	Unranked	---	---	---	---	---
BP: BORROW PIT	BORROW PITS	Unranked	---	---	---	---	---
Bu: BUTLER SILT LOAM	BUTLER	No	flat, interfluve, swale	---	---	---	---
	FILLMORE	Yes	playa	2A	YES	NO	NO
By: BREAKS-ALLUVIAL LAND COMPLEX	ULY	No	scarp, terrace	---	---	---	---
	HOBBS	No	channel, flood plain	---	---	---	---
CbC: COLY SILT LOAM, 7 TO 11 PERCENT SLOPES	COLY	No	hillslope	---	---	---	---
CbD: COLY SILT LOAM, 11 TO 31 PERCENT SLOPES	COLY	No	hillslope	---	---	---	---
Ce: CRETE SILT LOAM	CRETE	No	flat	---	---	---	---
	FILLMORE	Yes	playa	2A	YES	NO	NO
Cm: CASS LOAM	CASS	No	flood plain	---	---	---	---
Cs: CASS FINE SANDY LOAM	CASS	No	flood plain	---	---	---	---
Fm: FILLMORE SILT LOAM	FILLMORE	Yes	playa	2A	YES	NO	NO
	SCOTT	Yes	playa	3,2B3	YES	NO	YES
GeB2: GEARY SILTY CLAY LOAM, 3 TO 7 PERCENT SLOPES, ERODED	GEARY VARIANT	No	drainageway, hillslope	---	---	---	---
GeC2: GEARY SILTY CLAY LOAM, 7 TO 11 PERCENT SLOPES, ERODED	GEARY VARIANT	No	drainageway, hillslope	---	---	---	---
GP: GRAVEL PIT	PITS	Unranked	---	---	---	---	---
GsB: GEARY SILT LOAM, 3 TO 7 PERCENT SLOPES	GEARY	No	divide, hillslope	---	---	---	---
GsC: GEARY SILT LOAM, 7 TO 11 PERCENT SLOPES	GEARY	No	divide, hillslope	---	---	---	---

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
GsE: GEARY SILT LOAM, 11 TO 31 PERCENT SLOPES	GEARY	No	hillslope	---	---	---	---
	COLY	No	hillslope	---	---	---	---
	HOBBS	No	drainageway, flood plain	---	---	---	---
Ha: HALL SILT LOAM	HALL	No	interfluvial	---	---	---	---
	FILLMORE	Yes	playa	2A	YES	NO	NO
Hd: HORD SILT LOAM, 0 TO 1 PERCENT SLOPES	HORD	No	interfluvial	---	---	---	---
Hg: HOLDER SILT LOAM, 0 TO 1 PERCENT SLOPES	HOLDER	No	interfluvial	---	---	---	---
HgA: HOLDER SILT LOAM, 1 TO 3 PERCENT SLOPES	HOLDER	No	drainageway, hillslope, ridge	---	---	---	---
HgB: HOLDER SILT LOAM, 3 TO 7 PERCENT SLOPES	HOLDER	No	drainageway, hillslope	---	---	---	---
HgB2: HOLDER SILT LOAM, 3 TO 7 PERCENT SLOPES, ERODED	HOLDER	No	drainageway, hillslope	---	---	---	---
HgB3: HOLDER SILTY CLAY LOAM, 3 TO 7 PERCENT SLOPES, SEVERELY ERODED	HOLDER VARIANT, SEVERELY ERODED	No	drainageway, hillslope	---	---	---	---
HgC: HOLDER SILT LOAM, 7 TO 11 PERCENT SLOPES	HOLDER	No	drainageway, hillslope	---	---	---	---
HgC3: HOLDER SILTY CLAY LOAM, 7 TO 11 PERCENT SLOPES, SEVERELY ERODED	HOLDER VARIANT	No	drainageway, hillslope	---	---	---	---
HmB: HERSH FINE SANDY LOAM, 3 TO 7 PERCENT SLOPES	HERSH	No	flat, hummock	---	---	---	---
HR: HERSH-KENESAW COMPLEX, UNDULATING	HERSH	No	flat, hummock	---	---	---	---
	KENESAW	No	swale	---	---	---	---
Hs: HASTINGS SILT LOAM, 0 TO 1 PERCENT SLOPES	HASTINGS	No	interfluvial	---	---	---	---
HsA: HASTINGS SILT LOAM, 1 TO 3 PERCENT SLOPES	HASTINGS	No	interfluvial	---	---	---	---
Hv: HOBBS SILT LOAM	HORD	No	flood-plain step	---	---	---	---
Ig: INAVALE LOAMY FINE SAND	INAVALE	No	flood plain, hummock	---	---	---	---
In: INAVALE FINE SANDY LOAM	INAVALE	No	flood plain, hummock	---	---	---	---
INT: AQUOLLS	AQUOLLS	Yes	depression	3, 2B3	YES	NO	YES
Ks: KENESAW SILT LOAM, 0 TO 1 PERCENT SLOPES	KENESAW	No	interfluvial	---	---	---	---
	PERCHED WT PONDED SOILS	Yes	swale	2A	YES	NO	NO
		Yes	depression	3, 2B3	YES	NO	YES
KsA: KENESAW SILT LOAM, 1 TO 3 PERCENT SLOPES	KENESAW	No	hummock, interfluvial	---	---	---	---
	PERCHED WT	Yes	swale	2A	YES	NO	NO
KsB: KENESAW SILT LOAM, 3 TO 7 PERCENT SLOPES	KENESAW	No	hillslope, hummock	---	---	---	---
LA: LEX AND ALDA SOILS	LEX	No	flood plain	---	---	---	---
	ALDA	No	flood plain	---	---	---	---
M: MARSH	MASSIE	Yes	playa	2B3, 3	YES	NO	YES
M-W: MISCELLANEOUS WATER (SEWAGE LAGOONS)	MISCELLANEOUS WATER	---	---	---	---	---	---

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Map symbol and map unit name	Component	Hydric	Local landform	Hydric soils criteria			
				Hydric criteria code	Meets saturation criteria	Meets flooding criteria	Meets ponding criteria
Ms: MEADIN SANDY LOAM	MEADIN	No	terrace	---	---	---	---
Pt: PLATTE LOAM	PLATTE	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B2	YES	NO	NO
RB: ROUGH BROKEN LAND, LOESS	COLY	No	drainageway, hillslope, scarp	---	---	---	---
Ru: RUSCO SILT LOAM	RUSCO	No	depression, swale	---	---	---	---
	PERCHED WT PONDED SOILS	Yes	depression	2A	YES	NO	NO
Rw: RIVERWASH	GOTHENBURG	Yes	flood plain	3,2A	YES	NO	YES
S: SPOIL BANKS	USTORTHENTS	Unranked	berm	2B2	YES	NO	NO
Sc: SCOTT SILT LOAM	SCOTT	Yes	playa	---	---	---	---
Sy: SILTY ALLUVIAL LAND	SCOTT	Yes	playa	3,2B3	YES	NO	YES
	HOBBS	No	flood plain	---	---	---	---
	WT AT 0-1 FOOT	Yes	swale	2B3	YES	NO	NO
TxB: THURMAN-VALENTINE LOAMY FINE SANDS, UNDULATING	THURMAN	No	terrace	---	---	---	---
	VALENTINE	No	hummock, terrace	---	---	---	---
VbC: VALENTINE LOAMY FINE SAND, ROLLING	VALENTINE	No	hummock	---	---	---	---
W: WATER	WATER	Unranked	---	---	---	---	---

FOOTNOTE: There may be small areas of included soils or miscellaneous areas that are significant to use and management of the soil; yet are too small to delineate on the soil map at the map's original scale. These may be designated as spot symbols and are defined in the published Soil Survey Report or the USDA-NRCS Technical Guide, Part II. Areas mapped as water or any map unit that contains one of the following conventional symbols is considered a hydric soil map unit: marshes or swamps; wet spots; depressions; streams, lakes and ponds.

1. All Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Aquisalids, Pachic subgroups, or Cumulic subgroups that are:
  - a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
  - b. poorly drained or very poorly drained and have either:
    - (1) water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in), or for other soils
    - (2) water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
    - (3) water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.

